

IN THE CLAIMS

Each claim of the present application is set forth below with a parenthetical notation immediately following the claim number indicating the current claim status. The Examiner's entry of the claim amendments, as shown in marked-up form, under Section 1.116 is respectfully requested.

1. (CURRENTLY AMENDED) A method for identifying an integrated circuit device having a frequency marker device formed thereon, comprising:

applying power to the frequency marker device;

determining an oscillating frequency of the frequency marker device; and

associating the oscillating frequency with the integrated circuit device, wherein the integrated circuit device can be later identified by determining the oscillating frequency to identify the integrated circuit device according to the determined oscillating frequency.

2. - 4. (CANCEL)

5. (CURRENTLY AMENDED) The method of claim 4 for identifying an integrated circuit device having a frequency marker device formed thereon, wherein the integrated circuit device is formed during a plurality of processing steps, comprising:

applying power to the frequency marker device;

determining an oscillating the frequency of the frequency marker device; and

associating the oscillating frequency with the integrated circuit device to identify the integrated circuit device according to the determined oscillating frequency, and wherein the step of associating further comprises associating the frequency with the plurality of processing steps.

6. (CURRENTLY AMENDED) The method of claim 4, wherein the integrated circuit device is one of a plurality of integrated circuit devices formed on a semiconductor wafer, and wherein the step of associating further comprises associating the frequency with a location of the integrated circuit device on the semiconductor wafer.

7. (CANCEL)

8. (CURRENTLY AMENDED) The method of claim 4, wherein the frequency marker device comprises an odd-numbered plurality of serially connected inverter elements and a feedback loop.

9. (ORIGINAL) The method of claim 8 wherein each one of the plurality of inverter elements comprises a binary logic inverter.

10. (CURRENTLY AMENDED) The method of claim 4-5 wherein the integrated circuit device is one of a plurality of integrated circuit devices formed on a semiconductor wafer each one of the plurality of integrated circuit devices comprising a ring oscillator, and wherein the method further comprises determining an oscillating frequency of the ring oscillator of each one of the plurality of integrated circuit devices, and wherein the step of associating further comprises associating the oscillating frequency of the ring oscillator of each one of the plurality of integrated circuits devices with a location of the integrated circuit device on the semiconductor wafer.

11. (CANCEL)

12. (CANCEL)

13. (CURRENTLY AMENDED) The A method of claim 11 for manufacturing semiconductor devices, comprising:

- (a) providing a semiconductor wafer;
- (b) performing semiconductor fabrication processes on the semiconductor wafer;
- (c) forming semiconductor dice thereon in response to the fabrication processes, wherein the semiconductor dice comprise semiconductor devices, and wherein certain of the semiconductor dice comprise a frequency marker device;
- (d) applying power to the frequency marker device of a one of the semiconductor dice;
- (e) determining the oscillating frequency of the frequency marker device of the step (d);
- (f) associating the oscillating frequency with the one of the semiconductor dice; wherein the step (f) further comprises and associating the oscillating frequency with the semiconductor fabrication processes of the step (b).
- (g) repeating the steps (d) through (f) for each one of the semiconductor dice comprising a frequency marker device;
- (h) singulating the semiconductor wafer into individual semiconductor dice; and
- (i) maintaining the association of the step (f) after the semiconductor dice are singulated to identify the integrated circuit device according to the determined oscillating frequency.

14. (CURRENTLY AMENDED) The method of claim ~~14~~13 wherein the step (f) further comprises associating the oscillating frequency with the location of the semiconductor dice on the wafer.

15. - 19. (CANCEL)

20. (PREVIOUSLY PRESENTED) A method for identifying an integrated circuit device having a frequency marker device formed thereon, comprising:  
applying power to the frequency marker device;  
determining an oscillating frequency of the frequency marker device; and  
associating the oscillating frequency with the integrated circuit device to identify a failed integrated circuit device according to the determined oscillating frequency.